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Arthritis in Kawasaki Disease:

A poorly recognized manifestation

CENTRO HOSPITALAR DE LISBOA CENTRAL EPE

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BACKGROUND AND AIMS

- Kawasaki disease (KD) is an idiopathic acute systemic vasculitis.
- Arthritis is a common manifestation (30%)[1] not always evaluated.
- **Aim: determination of arthritis prevalence, clinical pattern and evolution**.

METHODS

- Descriptive study during a 15-year period.
- Inclusion criteria: all children with the diagnosis of KD[2]. Arthritis was characterized.
- Clinical, coronary involvement and laboratory data and treatment response were evaluated.
- Non-parametric tests were used. Level of significance α=0.05.

[1] GONG GW *et al*. Arthritis presenting during the acute phase of Kawasaki disease. J Pediatr 2006; 148: 800-5

[2] NEWBURGER JW *et al*. Diagnosis, Treatment, and Long-Term Management of Kawasaki Disease – AHA Scientific Statement. Circulation 2004; 110:2747-2771.

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RESULTS 1

SAMPLE data

n = 63	
Gender	60.3% boys
Age	Median 2 years (min 0.2; max 11.5)
Ethnic origin	84% caucasians
Complete KD	68.3%
Days to treatment	Median 6.5 (min 4; max 7)

ARTHRITIS data

Arthritis in KD 12.7% (8/63) | 0,85/y

PRESENTATION

75% Early (≤10 days)	Late (>10 days) 25%
62.5% Oligoarthritis	Poliarthritis 37.5%

LARGE JOINTS were involved in ALL patients

Days of disease to arthritis	**Median 4.5** (min 2; max 14)
Aditional therapy KD	**Aspirin**
Additional therapy for arthritis	Other NSAIDs
Duration of arthritis	**Median 14 days** (min 2; max 22)

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RESULTS 2

ARTHRITIS IN CHILDREN WITH KD

	WITH Arthritis N=8	NO Arthritis N=55	p*
Age – median (p25;p75)	**3.0 (2.5; 4.8)**	**1.8 (0.9; 3.0)**	**p=0,025**
Male sex	7.9%	52.4%	p=0.893
Days of fever to diagnosis – median (p25;p75)	7.0 (5.0; 9.0)	6.5 (6.0; 14.0)	p=0.520
Complete KD	75%	67.3%	P=0.717
Cardiac involvement	37.5%	30.9%	p= 0.701
CrP - mean	127.72mg/L	109.36mg/L	p=0.505
Need for 2nd IVIG	37.5%	14.5%	p=0.137

All recovered with no joint sequelae

* Level of significance α=0.05

CONCLUSIONS

- This study shows the importance of a systematic evaluation of articular involvement in KD.
- It's a short-lived phenomenon, predominantly with **early presentation** and involving **larger joints**[3].
- Patients are **older** and showed a tendency for **less response to initial IVIG**. Possibly the small size of sample didn't allow a statistical significance.
- Its expression can be sufficiently relevant to lead clinicians to alternative diagnoses and delay of KD therapeutics[4].

[3] IZUMI G, *et al*. Arthritis associated with Kawasaki disease: MRI findings and serum matrix metalloproteinase-3 profiles. Pediatr Int. 2011 Dec;53(6):1087-9.

[4] KOMATSU H, TATENO A. Failure to distinguish systemic-onset juvenile idiopathic arthritis from incomplete Kawasaki disease in an infant. J Paediatr Child Health. 2007 Oct;43(10):707-9.